Exposing Students to Regenerative Medicine (ExStRM)

Grant Award Details

Exposing Students to Regenerative Medicine (ExStRM)

Grant Type: SPARK

Grant Number: EDUC3-13129

Investigator:

Name:	Dolores Caffey-Fleming
Institution:	Charles R. Drew University of Medicine and Science
Type:	PI

Award Value: $499,500

Status: Pre-Active

Grant Application Details

Application Title: Exposing Students to Regenerative Medicine (ExStRM)

Public Abstract:

Although there have been an increase in the research training opportunities available to high school students, there is still the need not only to equip youth with the scientific skill set to critically understand, explore, and engage with the community but also to motivate students especially underrepresented minority students to become interested in a research career, focusing on regenerative medicine. Aligned with the overarching goal of CIRM, the ExStRM Program is designed to immerse students in an eight-week exposure to concepts and experiences that will spark interest, and an understanding of regenerative medicine and its impact on South Los Angeles Communities.

To provide a comprehensive and enriching experience for ExStRM trainees, students will attend workshops and other extracurricular activities with students participating in the host organization's existing high school summer program. The Program Director, Co-Director and Program Coordinator of the ExStRM Program, also serve as leaders for the organization's existing high school summer program. They have the experience and history of working together collaboratively in implementing innovative programs to provide hands-on research training and education to students from underrepresented minority groups. Students in the ExStRM Program will conduct research under the mentorship and supervision of renowed research faculty with expertise in regenerative medicine research using the latest and innovative stem cell techniques.Trainees will participate in patient and healthcare engagement activities such as blood and bone marrow donor drives, and community outreach activities to share their research experience using social media outlets such as blogs. In addition, students will participate in workshops and seminars that will provide them with the fundamentals in conducting regenrative medicine and presenting their research projects. The Program's overarching goal is to increase the number of underrepresented minority students (URM) prepared to pursue careers in regenerative medicine which will improve unmet medical needs. The Specific Aims are as follows:

Aim 1: Provide mentored support and leverage regenerative medicine research resources of existing research training programs at the host organization to propel underrepresented minority high school students in their trajectory as regenerative medicine research scientists.

Aim 2: Engage students in community outreach and patient engagement activities which will enhance their understanding of regenerative medicine.

Aim 3: Implement an evaluation and monitoring plan to continually assess and improve the effectiveness of the ExStRM program, emphasizing: i) recruitment and retention of promising URM high school students to graduate from high school and major in a science related degree with the goal of pursuing graduate studies in stem cell or regereative medicine, ii) ExStRM trainee-led dissemination of community-driven scientific results.

Statement of Benefit to California:

This proposed program will benefit the State of California and its citizens by increasing their understanding and knowledge of the importance of regenerative medicine. This program will also aid in developing a diverse biomedical workforce with highly developed quantitative, analytical, and problem-solving skills who are well trained and knowledgeable concerning health disparities in regenerative medicine in their California communities. This program will further the educational and scientific careers of high school students from backgrounds underrepresented in the sciences. It will both diversify and build the science workforce in California as well as increase the knowledge of regenerative medicine and stem cell research. Diversifying the scientific field is of critical importance to the state of California because a more diverse biomedical workforce has been repeatedly cited as a mechanism for addressing disparities in health and healthcare and there are shortages of underrepresented individuals in the science workforce in California. Exposing California high school students to this new field of regenerative medicine and stem cell research will allow them to explore biomedical research as a possible career, and to create a pipeline of future Californians to serve as stem cell biologists, genetic therapy, or regenerative medicine researchers.